

WHAT IS CLAIMED IS:

1. A vehicle navigation system provided with guidance target storing means for storing information about guidance target points, which is extracted from information about a preset route extending from a current position of a vehicle to a destination and which is based on map information, and guidance means for providing guidance on said route by voice or with display, said system comprising:
 - 10 road-between-guidance-target-points configuration determining means for determining a configuration of a road between two successive guidance target points whose information is extracted from the information stored in said guidance target storing means;
 - 15 continuous guidance threshold distance setting means for setting a threshold distance for continuous guidance based on the road configuration determined by said road-between-guidance-target-points configuration determining means;
 - 20 distance-between-guidance-target-points calculation means for calculating a distance between the two successive guidance target points whose information is extracted from the information stored in said guidance target storing means; and route guidance means for providing continuous guidance through said guidance means when the calculated distance between the two successive guidance target points is shorter than the threshold distance for continuous guidance set by said continuous guidance threshold distance setting means.

30 2. The vehicle navigation system according to Claim 1, wherein

said road-between-guidance-target-points configuration determining means determines the configuration of the road between the two successive guidance target points according to either one of following conditions: a number of lanes of the 5 road, a width of the road, a heading difference between directions in which the vehicle will be headed at the two successive guidance target points, respectively, and a turn angle showing what degree the vehicle will make a turn at a first one of the two successive guidance target points, and said 10 continuous guidance threshold distance setting means sets the threshold distance for continuous guidance based on a table showing a relationship between either one of the number of lanes, the road width, the heading difference and the turn angle and the threshold distance for continuous guidance.

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3. The vehicle navigation system according to Claim 1, wherein said road-between-guidance-target-points configuration determining means determines the configuration of the road between the two successive guidance target points according to 20 either one of following conditions: a number of lanes of the road, a width of the road, a heading difference between directions in which the vehicle will be headed at the two successive guidance target points, respectively, and a turn angle showing what degree the vehicle will make a turn at a first 25 one of the two successive guidance target points, and, when said road-between-guidance-target-points configuration determining means determines that either one of the number of lanes of the road, the road width and the heading difference is equal to or greater than a predetermined value or the turn 30 angle is equal to or less than a predetermined value, said

continuous guidance threshold distance setting means sets the threshold distance for continuous guidance to be longer than a reference distance, and said continuous guidance threshold distance setting means sets the threshold distance for
5 continuous guidance to be shorter than a reference distance otherwise.

4. The vehicle navigation system according to Claim 1, wherein
said road-between-guidance-target-points configuration
10 determining means determines the configuration of the road
between the two successive guidance target points according to
either one of following conditions: a number of lanes of the
road, a width of the road, a heading difference between
directions in which the vehicle will be headed at the two
15 successive guidance target points, respectively, and a turn
angle showing what degree the vehicle will make a turn at a first
one of the two successive guidance target points, and said
continuous guidance threshold distance setting means sets the
threshold distance for continuous guidance according to a
20 relational expression showing a relationship between either one
of the number of lanes of the road, the road width, the heading
difference and the turn angle and the threshold distance for
continuous guidance.

25 5. A vehicle navigation system provided with guidance target
point storing means for storing information about guidance
target points, which is extracted from information about a
preset route extending from a current position of a vehicle to
a destination and which is based on map information, and
30 guidance means for providing guidance on said route by voice

or with display, said system comprising:

travel-time-between-guidance-target-points

determining means for determining either one of a travel time required for the vehicle to travel on a road between two successive guidance target points whose information is extracted from the information stored in said guidance target point storing means and a speed limit on the road;

continuous guidance threshold distance setting means for setting a threshold distance for continuous guidance based on the travel time or the speed limit determined by said travel-time-between-guidance-target-points determining means;

distance-between-guidance-target-points calculating means for calculating a distance between the two successive guidance target points whose information is extracted from the information stored in said guidance target point storing means; and

route guidance means for providing continuous guidance through said guidance means when the calculated distance between the two successive guidance target points is shorter than the threshold distance for continuous guidance set by said continuous guidance threshold distance setting means.

6. The vehicle navigation system according to Claim 5, wherein
said travel-time-between-guidance-target-points determining means determines either one of the travel time required for the vehicle to travel on the road between the two successive guidance target points and the speed limit on the road based on a travel time or a speed limit prestored in each link information included in the map information, and said

continuous guidance threshold distance setting means sets the threshold distance for continuous guidance based on a table showing a relationship between the travel time or the speed limit and the threshold distance for continuous guidance.

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7. The vehicle navigation system according to Claim 5, wherein said travel-time-between-guidance-target-points determining means determines either one of the travel time required for the vehicle to travel on the road between the two successive 10 guidance target points and the speed limit on the road based on a travel time or speed limit prestored in each link information included in the map information, and when said travel-time-between-guidance-target-points determining means determines that the determined travel time is equal to or less 15 than a predetermined value or the determined speed limit is equal to or greater than a predetermined value, said continuous guidance threshold distance setting means sets the threshold distance for continuous guidance to longer than a reference distance, and sets the threshold distance for continuous 20 guidance to shorter than the reference distance otherwise.

8. The vehicle navigation system according to Claim 5, wherein said travel-time-between-guidance-target-points determining means determines either one of the travel time required for the 25 vehicle to travel on the road between the two successive guidance target points and the speed limit on the road based on a travel time or speed limit prestored in each link information included in the map information, and said continuous guidance threshold distance setting means sets the 30 threshold distance for continuous guidance according to a

relational expression showing a relationship between the determined travel time or the determined speed limit and the threshold distance for continuous guidance.

5 9. A route guidance method comprising the steps of:

storing information about guidance target points placed on a route extending from a current position of a vehicle to a destination;

10 determining a configuration of a road between two successive guidance target points, whose information is extracted from said stored information;

setting a threshold distance for continuous guidance based on the determined road configuration;

15 calculating a distance between the two successive guidance target points; and

providing continuous guidance when the calculated distance between the two successive guidance target points is shorter than said set threshold distance for continuous guidance.

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10. A route guidance method comprising the steps of:

storing information about guidance target points placed on a route extending from a current position of a vehicle to a destination;

25 determining a travel time required for the vehicle to travel on a road between two successive guidance target points whose information is extracted from said stored information;

setting a threshold distance for continuous guidance based on the determined travel time;

30 calculating a distance between the two successive

guidance target points; and

providing continuous guidance when the calculated distance between the two successive guidance target points is shorter than said set threshold distance for continuous
5 guidance.